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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/512,051	11/10/2004	Akihiko Ito	5417-0105PUS1	8417

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EXAMINER

VELEZ, ROBERTO

ART UNIT	PAPER NUMBER
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2829

NOTIFICATION DATE	DELIVERY MODE
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10/01/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/512,051

Applicant(s)

ITO ET AL.

Examiner

Roberto Velez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 16-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 16-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 August 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 10/07, 11/06, 08/02.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/02/2007 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 11-14 and 16-18 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3. Claims 11-14 and 16-18 are objected to because of the following informalities: Claim 11, line 3, recites "against a contact portions". It should recite, "against contact portions". Claims 12-14 and 16-18 depending from claim 11 are objected for the same reason. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 11-13 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Maeng (US Pat. 6,563,331)** in views of **Ito et al. (WO 99/01776)** and **Sakai (US Pat. 5,650,732)**.

Note: **Ito et al. (US Pat. 6,459,259)** is the US Patent resulting from a National Stage application of WO 99/01776 and will be used as the translation of WO 99/01776 in the rejection.

Regarding claim 11, **Maeng** shows (Figures 1-4) an electronic device testing apparatus, for conducting a test of electronic devices prior to molding by pressing input/output terminals of said electronic devices against contact portions of a test head; wherein said electronic device testing apparatus comprises: at least one moving means [34, 36, 38, 40] capable of gripping a plurality of said strip formats [10] at a loading position of pre-test electronic devices (Column 7, Lines 58-60), while conveying said gripped strip formats [10] to said contact portions [23] without reloading said electronic devices from said strip formats [10], and (Column 8, Lines 1-8) while pressing (inherently, in order to connect the input/output terminals to said contact portions, there must be some pressing action involved to complete the task) input/output terminals of said electronic devices against said contact portions [23] at the same time while said electronic devices are being loaded on said strip formats [10], the sum of said contact portions matches with the simultaneously measured number limited in said electronic device testing apparatus (Col. 8, Ln 22-26).

Maeng fails to disclose said test head has a plurality of contact groups composed of a set of said contact portions, and said each strip format gripped by said moving means corresponds to said each contact group. However, **Ito et al.** discloses said test head has a plurality of contact groups (two test heads) composed of a set of

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said contact portions (sockets) (Col. 32, Ln 58-64), and said each strip format [3] gripped by said moving means corresponds to said each contact group (Col. 32, Ln 58-64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of *Ito et al.* into the device of *Maeng* by having a plurality of contact groups composed of a set of said contact portions, and said each strip format gripped by said moving means corresponds to said each contact group. The ordinary artisan would have been motivated to modify *Maeng* in the manner set forth above for the purpose of making double simultaneously measurement, therefore, reducing the time required to complete the testing on all of the electronic devices, producing the advantage of greatly saving the testing cost per electronic device (Col. 35, Ln 49-67).

The combination of *Maeng* and *Ito et al.* fails to disclose at least one moving means capable of simultaneously gripping a plurality of said strip formats. However, *Sakai* discloses (Column 5, Lines 18-25) at least one moving means [21] capable of simultaneously gripping a plurality of said strip formats [9].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of *Sakai* into the device of the combination of *Maeng* and *Ito et al.* by having at least one moving means capable of simultaneously gripping a plurality of said strip formats. The ordinary artisan would have been motivated to modify the combination of *Maeng* and *Ito et al.* in the manner set forth above for the purpose of improving the equipment operation ratio because the lot size operation in a time can be doubled or more without any limit.

Regarding claim 12, the combination of *Maeng*, *Ito et al.* and *Sakai* discloses everything as claimed above in claim 1; in addition, *Maeng* shows (Figures 1-4) wherein

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said moving means [34, 36, 38, 40] is capable of freely selecting the gripping number [10] within the number able to be gripped (Column 8, Lines 35-38 and 45-47).

Regarding claim 13, the combination of **Maeng, Ito et al.** and **Sakai** discloses everything as claimed above in claim 1; in addition, **Maeng** shows (Figures 1-4) wherein said moving means [34, 36, 38, 40] is capable (Column 8, Lines 35-38 and 45-47) of freely selecting the gripping number [10] being independent from other means (each moving means works independently).

Regarding claim 16, the combination of **Maeng, Ito et al.** and **Sakai** discloses everything as claimed above in claim 1; in addition, **Maeng** shows (Figures 1-4) wherein each of said moving means [34, 36, 38, 40] grips and moves (Column 8, Lines 35-38 and 45-47) said strip format [10] from said contact portions [23] to a loading (using 34, 36, 38, 40) position of post-test electronic devices.

Regarding claim 17, the combination of **Maeng, Ito et al.** and **Sakai** discloses everything as claimed above in claim 1; in addition, **Maeng** discloses (Column 8, Lines 22-26) wherein a sum of the numbers of contact portions in said test head [23] is 2^n .

Regarding claim 18, the combination of **Maeng, Ito et al.** and **Sakai** discloses everything as claimed above in claim 1; in addition, **Maeng** discloses (Column 8, Lines 22-26) wherein $n=5$ or $n=6$.

6. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Maeng (US Pat. 6,563,331)**, **Ito et al. (WO 99/01776)** and **Sakai (US Pat. 5,650,732)** as applied to claim 11, and further in view of **Kim et al. (US Pat. 6,518,745)**.

Regarding claim 14, the combination of **Maeng, Ito et al.** and **Sakai** discloses everything as claimed above in claim 11.

The combination of **Maeng, Ito et al.** and **Sakai** fails to disclose wherein said any two or more moving means among said plurality of moving means have a substantially overlapping operation range on a contact group as a set of said contact portions. However, **Kim et al.** shows (Fig. 1) wherein said any two or more moving means [33, 32] among said plurality of moving means have a substantially overlapping operation range on a contact group [21, 22, 23] as a set of said contact portions.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of **Kim et al.** into the device of the combination of **Maeng, Ito et al.** and **Sakai** by having an overlapping operation range on a contact group among a plurality of moving means. The ordinary artisan would have been motivated to modify the combination of **Maeng, Ito et al.** and **Sakai** in the manner set forth above for the purpose of providing a faster way to test all the semiconductor devices.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberto Velez whose telephone number is 571-272-8597. The examiner can normally be reached on Monday-Friday 8:00am- 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ha Nguyen can be reached on 571-272-1678. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For

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more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Roberto Velez
Patent Examiner



HA TRAN NGUYEN
SUPERVISORY PATENT EXAMINER

9/25/7